SKILL 4 MEASUREMENTS OF VITAL SIGNS — TEMPERATURE, PULSE AND RESPIRATION (TPR)

Structure

4.0 Objectives
4.1 Introduction
4.2 Meaning and Definition of Vital Signs
4.3 Checking Temperature
  4.3.1 Definition and Purposes
  4.3.2 Normal Body Temperature
  4.3.3 Sites of Taking Temperature
  4.3.4 Types of Thermometers
  4.3.5 General Instructions for Taking Temperature
  4.3.6 Procedure
  4.3.7 Conversion of Temperature Reading
4.4 Checking Pulse
  4.4.1 Definition and Purposes
  4.4.2 Normal Value
  4.4.3 Sites of Taking Pulse
  4.4.4 General Instructions for Taking Pulse
  4.4.5 Procedure of Taking Pulse
4.5 Checking Respiration
  4.5.1 Definition and Purposes
  4.5.2 Normal Values of Respiration
  4.5.3 General Instructions for Taking Respiration
  4.5.4 Procedure of Checking Respiration
4.6 Recording and Reporting Temperature, Pulse, Respiration
4.7 Let Us Sum Up
4.8 Activities

4.0 OBJECTIVES

After studying this practical, you should be able to:

- define temperature, pulse and respiration;
• identify the normal value and variations of temperature, pulse and respiration;
• identify the various sites of taking temperature and pulse;
• follow accurate steps of taking temperature, pulse and respiration;
• record the temperature, pulse and respiration accurately on the graph or a sheet; and
• use formula for conversion of temperature readings.

4.1 INTRODUCTION

In the previous skill we have discussed about meeting personal hygiene of the patient, keeping room clean and safety measures to be taken at home. You might have observed checking of Temperature, Pulse, Respiration (TPR) and Blood Pressure (B.P) at hospital, home or in your neighbourhood. TPR and BP are called as vital signs. The vital signs are checked to know and monitor the health condition of a person or a patient. As a home based care provider you may need to record temperature, pulse and respiration of a patient, we shall discuss about the definition and purposes of normal value, sites and procedure for checking vital signs. At the end we shall discuss about recording and reporting of temperature, pulse and respiration. You will learn about blood pressure in skill 5.

4.2 MEANING AND DEFINITION OF VITAL SIGNS

Let us discuss meaning and definition of vital signs. Temperature, Pulse, Respiration and Blood Pressure readings are the basic functions of the body. These are the signs of living being and that is why these are the known as vital signs.

Purposes of vital signs:
The purposes of observing vital signs are to:
• monitor normal function of the body
• identify any change in normal functioning of vital organs
• assess the condition of the patient before and after treatment.

4.3 CHECKING TEMPERATURE

As you know the feeling of heat and cold indicates body temperature. We shall focus on definition and purposes of temperature as given below.

4.3.1 Definition and Purposes

Let us begin with definition and then talk about purposes.

Definition

Temperature may be defined as degree or amount of body heat. It is the balance
between heat produced and heat lost by the body. It is measured in heat units called degrees such as Fahrenheit (F) and centigrade (C), which is denoted by the sign (°). Normally the body temperature is lower in the morning and higher in late afternoon and evening.

**Purposes**

The purposes of taking temperature are to:

- identify whether the body temperature is within normal range
- detect any change from the normal
- detect any change in temperature in response to treatment or medication.

### 4.3.2 Sites of Taking Temperature

You can measure the body temperature in any one of the following five areas or sites such as:

1) The mouth
2) The underarm (axilla)
3) The rectum
4) The ear
5) The forehead

But most commonly used sites of measuring body temperature are mouth and axilla.

Now let us briefly explain about these sites.

1) **Mouth:** It is the measurement of temperature by placing thermometer under the tongue (sublingual) Fig. 4.1 (a-b)

![Fig. 4.1 (a) Thermometer under the tongue (b) Holding Thermometer in the mouth](image)

2) **Axilla:** It is the measurement of temperature by placing thermometer in the armpit.
Other sites are:

3) **Rectum** It is the measurement of temperature by inserting the thermometer in the anus (Passage of stool). Fig. 4.3 Thermometer in the ractum.

4) **Temporal Artery**: It is measuring temperature on the forehead using a chemical thermometer.

### 4.3.3 Normal Body Temperature

The body temperature as discussed earlier is measured in degrees on two scales; the Fahrenheit (F) and Centigrade or Celsius (C) scale. Normal body temperature readings by various sites are given below in table 4.1.
Table 4.1: Normal range of body temperature

<table>
<thead>
<tr>
<th>Sites</th>
<th>Normal range of temperature in Fahrenheit</th>
<th>Normal range of temperature in Centigrate/Celsius</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
<td>97.6°F-98.6°F</td>
<td>36.5°C-37.5°C</td>
</tr>
<tr>
<td>Rectal</td>
<td>98.6°F-100.6°F</td>
<td>37.0°C-38.1°C</td>
</tr>
<tr>
<td>Axillary</td>
<td>96.6°F-98.6°F</td>
<td>36°C-37°C</td>
</tr>
<tr>
<td>Tympanic</td>
<td>97.6°F-99.6°F</td>
<td>36.5°C-37.5°C</td>
</tr>
</tbody>
</table>

Body temperature in an older person is usually lower, because of a slower metabolism. The average body temperature in older adult is 96.8°F.

Rise in body temperature above the normal level is called fever or pyrexia. Fever is a condition of the body when it is too hot because of illness.

Do you know that fever has three stages which include onset (beginning), fastigium (rise) and decline (lowering of temperature). (Fig. 4.5)

Stages of fever

Onset — In this stage there is a gradual (slow) rise in temperature

Fastigium/stadium — In this stage, body temperature reaches its maximum and remains constant at a high level.

Decline — In this stage increased temperature returns to normal/or lower down.

![Stages of fever diagram](image)

Fig. 4.4: Stages of fever

4.3.4 Types of Thermometers

The instrument used to measure the temperature is called as thermometer. Four types of thermometers are available for checking body temperature. These are as follows: (Fig 4.6 a-d)

1) Glass thermometer/Clinical thermometer (oral or rectal)
2) Electronic thermometer

3) Disposable thermometer

4) Tympanic membrane thermometer

The most commonly used thermometer is Glass thermometer for checking temperature.

We shall briefly discuss about the types of thermometers as you may sometimes come across such thermometers being used in a community or a family.

1) **Glass Thermometer:** It is a hollow glass tube sealed at one end and bulb filled with mercury at the other end.

There are three types of glass thermometers (Fig. 4.5). Each has a different bulb or tip. The thermometer with long or slender tip is used for taking oral and axillary temperature. In other words, we can say that for taking temperature by mouth or underarms same thermometer is used. The thermometer with short and pear shaped tip is used for checking rectal temperature.

Glass thermometers have a Fahrenheit or Centigrade scale or some have both scales.

Fahrenheit thermometer has long and short lines. Every other long line is marked in an even degree from 94°F to 108°F. The short line indicates or is equal to 0.2 (two tenth of a degree).

Centigrade thermometers also have long and short lines. Each long line represents 1 degree. It ranges from 34°C to 42°C. Each short line represents 0.1°C (one tenth of a degree).

When the thermometer is exposed to body heat the mercury expands and rises in the tube. When it is cooled the mercury contracts and moves down the tube.

2) **Electronic Thermometer:** It is a battery operated display unit. It consists of oral and rectal probes. The temperature is displayed/shown on the front of the instrument. We can measure temperature in 2 to 60 seconds/1 minute (Fig. 4.6).
3) **Disposable Thermometer:** This is a thin strip of plastic having small chemical dots. These dots change color when exposed to body heat. They measure temperature in 45 to 60 seconds. These thermometers are used only once (Fig. 4.7).

![Disposable Thermometer](image)

**Fig.4.7: Disposable Thermometer**

### 4.3.5 General Instructions for Taking Temperature

- Ensure that the patient does not eat, drink, smoke or chew gum for at least 15-20 minutes before taking oral temperature.

- Never take oral temperature in infants or children less than 4 to 5 years of age and in an unconscious patient.

- Special consideration.

Do not take oral temperature if a person is:

- Unconscious, confused, disoriented or restless.

- Using oxygen, or breathing through mouth or has sore throat.

- Paralyzed on one side of the body.

- Surgery of mouth, face, neck or throat.

- Bring down the mercury level below 95°F or 35°C before placing the thermometer at selected site.

- Wipe the thermometer before taking temperature from bulb to stem and from stem to bulb after taking the temperature.

- Ensure that the patient does not bite the thermometer while it is in the mouth.

- Never leave the patient alone with thermometer.
• For taking axillary temperature, wipe the axilla with the tissue or towel before taking temperature.

• For taking rectal temperature give lateral position and lubricate the thermometer properly.

4.3.6 Procedure for Taking Temperature

When you have to check the temperature by mouth/axilla you should follow the following steps.

Collect all the articles for taking temperature. These include the following:

For oral temperature:

• Thermometer (Oral/Axillary)
• A bottle containing Dettol or Savlon/soap solution
• A bottle containing plain water
• Wet cotton swabs
• Dry swabs/tissue paper at home to dry the thermometer
• Kidney tray/paper bag
• Record sheets and pen/pencils

For rectal temperature: (In addition to above articles)

• Gauze pieces/tissue
• Gloves if available
• Vaseline
• Screen if available
• A Plastic Sheet/Mackintosh if available

In the home situation all the above articles may not be available so you can use following articles:

• Use soap/soap solution in place of dettol
• Use running tap water or pour water from a container
• Use tissue in place of cotton swabs.
• Explain the procedure to the patient/patient
• Ask him/her not to eat, drink, smoke or chew anything for atleast 15-20 minutes before taking temperature
• Wash hand
Measurement of Vital Signs - TPR

Steps for recording oral temperature:

1. After washing hands rinse the thermometer in cold water
2. Shake thermometer with a quick flip of the wrist till the mercury goes down to 95.5°F
3. Insert the thermometer under the tongue and instruct the patient to close mouth for 3 minutes
4. Read the thermometer by rotating
5. Record temperature.

Fig. 4.8: Shaking thermometer

- Ask the patient to moisten lips and open the mouth.
- Place the bulb end of thermometer under the person’s tongue (Fig. 4.7b).
- Ask the person/patient to close the lips around the thermometer to hold it in place.
- Check the time, read instructions given on the thermometer
- Leave the thermometer in place for 2-3 minutes place
- Remove the thermometer from the mouth.
- Wipe the thermometer from stem to bulb with a dry swab
Hold the thermometer at the stem with your thumb and finger tips (Fig. 4.9).

Bring the thermometer to eye level (Fig. 4.10).

Rotate the thermometer until you can see the numbers and long and short lines. Note that each long line measures 0.5°C and each small line measures 0.1°C on a centigrade thermometer and each small line on a Fahrenheit thermometer represents 0.2°F and each long line represents 1°F.

Turn the thermometer back and forth slowly until you can see silver (white) or (red) mercury line.

Read the thermometer.

Shake down the thermometer after use.

Clean the thermometer with soapy swabs from stem to bulb and rinse with water preferably running water under the tap.

Put in a disinfectant solution or when thermometer is not in use, you can put it in a closed case after cleaning and drying.

Make the patient comfortable.
• Record the reading of temperature and inform the person about the temperature reading if required.

• Report if any abnormality.

Steps for recording axillary temperature

• Collect all the articles as mentioned above

• Explain the procedure to the patient/persons (i.e. we are going to take/count pulse)

• Wash your hands

• Rinse and dry the thermometer

• Shake down the thermometer

• Help the person remove the arm from gown or shirt

• Do not expose the person

• Dry and wipe the axilla with a towel or tissue

• Place bulb end of the thermometer in the centre of the axilla as shown in Fig. 4.2.

• Help the patient to place the arm over the chest and hold the thermometer in place.

In case the patient is not able to do it himself or if the patient is an infant or child, you should hold the thermometer and the arm in place (Fig. 4.2).

• Leave the thermometer for 3-4 minutes

• Remove the thermometer

• Wipe the thermometer from stem to bulb

• Read the thermometer at eye level

• Shake down the thermometer

• Help the person to put the shirt or gown back

• Make the patient/person comfortable

• Rinse and wash the thermometer and place it in disinfectant lotion

• Wash your hands

• Record the reading in record sheet

• Report any abnormal temperature
Steps for recording rectal temperature

• Collect all the articles
• Explain the procedures to the patient/person
• Wash your hands
• Place or help the person/patient to take side line position
• Put on gloves if available
• Take out the lubricant and place it on a cotton swab
• Apply the lubricant to the bulb and above 2.5 cm from the bulb
• Fold back the linen and cloth to expose the anal area
• Gently separate the buttocks with gauze piece with your left hand and insert the thermometer with your right hand upto the 98.6°F mark of the thermometer (1 ½ inches) as shown in Fig. 4.3.

• Ask the person to take deep breath
• Thermometer should be held in place for children and elderly patients.
• Hold the thermometer in place for 2 minutes
• Remove the thermometer
• Wipe the thermometer with cotton swabs from stem to bulb end
• Place the thermometer on a clear paper or tissue paper
• Wipe the anal area to remove excess lubricant and any faecal matter
• Cover the person and make the person comfortable
• Dispose the used material
• Read the thermometer
• Write ‘R’ to indicate rectal temperature
• Wash thermometer thoroughly with soap cold water (never hot) and clean with a piece of cotton and rub well
• Disinfect the thermometer if the patient has infectious disease
• Remove gloves and wash your hands
- Record the temperature on a record book
- Report any abnormality in temperature

Remember that you put the thermometer in various sites for accurate time as shown in following table:

<table>
<thead>
<tr>
<th>Site</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mouth</td>
<td>2-3 Minutes</td>
</tr>
<tr>
<td>Axilla</td>
<td>3-4 Minutes</td>
</tr>
<tr>
<td>Rectum</td>
<td>2 Minutes</td>
</tr>
</tbody>
</table>

**Table 4.2: Time required for putting thermometer at various sites**

**4.3.7 Conversion of Temperature Reading**

You can convert Fahrenheit into Celsius and Celsius in Fahrenheit by using the following formula.

To convert Fahrenheit scale into Celsius scale deduct 32 from the Fahrenheit reading and then multiply the fraction by 5/9 using the following formula.

\[
C = \frac{(F - 32) \times 5}{9}
\]

C denotes temperature in Celsius and F denotes Fahrenheit temperature

For example, if temperature reading in Fahrenheit scale is 100°F you can convert it in to centigrade or Celsius as follows:

\[
C = \frac{(100 - 32) \times 5}{9} = \frac{68 \times 5}{9} = 37.8
\]

The temperature in Celsius scale is 37.8°C

To convert Celsius into Fahrenheit scale use the following formula:

Multiply the centigrade reading of temperature (i.e. °C) by 9/5 and then add 32 using the following formula.

\[
F = \left( C \times \frac{9}{5} \right) + 32
\]

Where F denotes temperature in Fahrenheit and C denotes temperature in Celsius.

For example if temperature reading in centigrade scale is 38.5°C you can convert it into Fahrenheit as follows:

\[
F = (38.5 \times 9/5) + 32
\]
\[
\text{Practical Manual – I} = \frac{346.5}{5} + 32 = 69.3 + 32 = 101.3\text{°F}
\]

So \(\text{F} = 101.3\text{°F}\)

Therefore the temperature in Fahrenheit scale of 101.3\text{°F} is 37.8\text{°C}.

Look at table 4.3. It gives the values of temperature in both Fahrenheit scale and centigrade scale. You can use this table for conversion of the temperature.

<table>
<thead>
<tr>
<th>Centigrade</th>
<th>Fahrenheit</th>
</tr>
</thead>
<tbody>
<tr>
<td>34.0</td>
<td>93.2</td>
</tr>
<tr>
<td>35.0</td>
<td>95.0</td>
</tr>
<tr>
<td>36.0</td>
<td>96.8</td>
</tr>
<tr>
<td>36.5</td>
<td>97.7</td>
</tr>
<tr>
<td>37.0</td>
<td>98.6</td>
</tr>
<tr>
<td>37.5</td>
<td>99.5</td>
</tr>
<tr>
<td>38.0</td>
<td>100.4</td>
</tr>
<tr>
<td>38.5</td>
<td>101.3</td>
</tr>
<tr>
<td>39.0</td>
<td>102.2</td>
</tr>
<tr>
<td>40.0</td>
<td>104.0</td>
</tr>
<tr>
<td>41.0</td>
<td>105.0</td>
</tr>
<tr>
<td>42.0</td>
<td>107.6</td>
</tr>
<tr>
<td>43.0</td>
<td>109.4</td>
</tr>
<tr>
<td>44.0</td>
<td>111.2</td>
</tr>
</tbody>
</table>

**4.4 CHECKING PULSE**

During the heart beat blood is pumped through arteries to various parts of the body. As the heart beats you can feel throbbing over the artery when you place your fingers and this throbbing is actually the pulse. Now let us define pulse and learn its purposes as given below.
4.4.1 Definition and Purposes

**Definition**

The pulse is throbbing that you can feel over the artery as the heart beat. You can feel a pulse as you place your finger tips over an artery close to the surface of the skin. You take a pulse to determine a person’s heart rate. The heart rate is the number of pulse beats, or heart beats, that you count in 1 minute. You can also hear a pulse by using a stethoscope.

Do you know that pulse rate is expressed as beats per minute?

**Purposes:**

- To assess the heart rate of a person/patient
- To determine the normal value of pulse
- To detect any deviation from normal

4.4.2 Normal Value

The normal pulse rate in various age groups is given below in Table 4.4.

<table>
<thead>
<tr>
<th>Age</th>
<th>Pulse rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>New born</td>
<td>130-140/mt</td>
</tr>
<tr>
<td>Infant</td>
<td>115-130/mt</td>
</tr>
<tr>
<td>2 year</td>
<td>100-115/mt</td>
</tr>
<tr>
<td>3 year</td>
<td>90-100/mt</td>
</tr>
<tr>
<td>4-10 yrs</td>
<td>86-90/mt</td>
</tr>
<tr>
<td>10 yrs to adult</td>
<td>70-80/mt</td>
</tr>
<tr>
<td>Old age</td>
<td>60-70/mt</td>
</tr>
</tbody>
</table>

4.4.3 Sites of Taking Pulse

There are nine sites (Table 4.5) from where pulse can be felt. But the pulse is most commonly felt at the radial artery i.e. thumb site of the wrist, carotid artery (neck) and brachial (elbow) artery (Fig. 4.11).

**Note:** The radial pulse is most frequently used when taking routine vital signs.
Description of sites of taking pulse is given in the table 4.5

**Table 4.5: Sites of taking pulse**

<table>
<thead>
<tr>
<th>Sites</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temporal</td>
<td>Feeling of pulse on the temporal bone of the head i.e. the site which is above and lateral to (or away from mid line) eye</td>
</tr>
<tr>
<td>Carotid (Neck)</td>
<td>On the either side of front of the neck (The site where the carotid artery runs between trachea and sternocleidomastoid muscle)</td>
</tr>
<tr>
<td>Apical Pulse (At the apex of heart)</td>
<td>Site on the left side of the chest about 8 cm (3 inches) to the left of the sternum and at the fourth, fifth, or sixth inter costal space (Inter costal space means area between the ribs). This is checked by using stethoscope.</td>
</tr>
<tr>
<td>Brachial Pulse (Elbow)</td>
<td>Site at the inner aspects of biceps muscle of the arms (In the anteceubital space).</td>
</tr>
<tr>
<td>Radial Pulse (Wrist)</td>
<td>On the thumb side of inner aspect of the wrist (Where radial artery runs along radial bone)</td>
</tr>
<tr>
<td>Femoral Pulse</td>
<td>Site along inguinal ligament (Area in the groin)</td>
</tr>
<tr>
<td>Popliteal Pulse</td>
<td>Pulse felt at knee flexion on the back of knee (Site where popliteal artery passes behind the knee)</td>
</tr>
<tr>
<td>Posterior Tibial Pulse</td>
<td>Medial surface of ankle (site where posterior tibial artery passes behind medial malleolus)</td>
</tr>
<tr>
<td>Pedal Pulse</td>
<td>Pulse felt on dorsum of foot on an imaginary line drawn from middle of the ankle to the space between the big and second toe.</td>
</tr>
</tbody>
</table>
4.4.4 General Instructions for Taking Pulse

- Wait for 5-10 minutes if the patient is active
- Ensure that the patient is calm and relaxed
- Ask the patient not to talk while you are checking pulse
- Do not press hard your finger over the arteries while feeling the pulse
- Count the pulse for one full minute using a watch with second hand.

4.4.5 Procedure of Taking Pulse

The steps of checking pulse of a patient are given below:

- Collect all the equipment, which include watch or clock with second’s hand and recording sheet and pen
- Explain the patient what you are going to do i.e. checking the pulse
- Have a watch which has second’s hand in front of you
- Wash your hands
- Select the site of the pulse (normally radial pulse is taken)
- Make the person to sit or lie down. You can help him to rest the arm alongside the body with palm facing downwards or fore arm can rest at 90 degree angle across the chest. If the patient is sitting, forearm can be put across the thigh with palm of hand facing downward.
- Gently place the tips of 1st three fingers of your right hand above the wrist of the person on the side of his thumbs by putting your thumb on other side of wrist until you feel the pulse. (Fig 4.12) If you cannot feel the pulse at the first attempt move your fingers slightly until you can feel it.

*Never use your thumb to feel a pulse because there is a pulse in your thumb that you may mistake for the patient’s pulse.*

- Count the number of pulsations (beats for one minute) using a watch with a second’s hand.
- Note the strength and regularity of the beats (i.e. interval between the two pulsations/beats) as you are counting the pulse.
- Record the pulse in the record sheet.

If you find the pulse is less than 70-80 beats per minute and more than 80 beats per minute in an adult you should report it.

- Make the patient/person comfortable
4.5 CHECKING RESPIRATION

Do you know that when we breath in the air, our chest expands and air is taken (inhaled) in the lungs and when we breath out chest returns to its resting position and air is taken out (exhaled). This act of breathing in and breathing out is called respiration.

Now let us learn the definition and purposes of respiration.

4.5.1 Definition and Purposes

Definition

Respiration is an act of breathing (i.e. rise and fall of the chest). Respiration has two parts – inhalation and exhalation. When we breathe in or take air in the lungs it is called inspiration or inhalation and when we breathe out or take out the air from the lungs it is called expiration or exhalation. One inhalation and one exhalation make up one respiration.

Purposes:

- To assess the rate of respiration.
- To detect any deviation.

4.5.2 Normal Values of Respiration

The respiratory rate varies according to age normally. Look at the following table. You will find the normal respiratory rate in various age groups.
Table 4.6: Normal respiratory rate in various age groups

<table>
<thead>
<tr>
<th>Age</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>New born</td>
<td>40-60 per minute</td>
</tr>
<tr>
<td>12 months-2 years</td>
<td>50 per minute</td>
</tr>
<tr>
<td>2 years-5 years</td>
<td>40 per minute</td>
</tr>
<tr>
<td>Adolescent</td>
<td>18-20 per minute</td>
</tr>
<tr>
<td>Adult</td>
<td>18-20 per minute</td>
</tr>
<tr>
<td>Old Age</td>
<td>10-24 per minute</td>
</tr>
</tbody>
</table>

4.5.3 General Instructions for Taking Respiration

- Check respiration after feeling the pulse
- Check the respiration in lying down or sitting position
- Wait for 5-10 minutes if the patient has been active
- Make sure that you count the inspiration and expiration as one respiration.

4.5.4 Procedure of Checking Respiration

While checking the respiration you should follow the following steps:

- Collect all the articles i.e. watch or clock with second’s hand, record sheet and pen.
- Explain the person/patient what you are going to do
- Wash hands
- Keep the person/patient in a comfortable position preferably in sitting or lying down position
- Wait for 5-10 minutes if person/patient is active
- Observe/Watch the rise and fall of the chest (Fig. 4.13)
- Count the number of respirations (rise and fall) for one minute using a watch with second’s hand (one respiration is equal to one rise and one fall of chest)
- Record the rate of respiration in a record sheet
- If you find that respiration is less than 10 or more than 35 per minute in an adult person/patient you should report it
- Make the patient comfortable.

You can observe (count respiration) after you have counted the pulse so that you will be able to record it accurately. In such situation you can place the arm of the patient across the chest.
4.6 RECORDING AND REPORTING TEMPERATURE, PULSE, RESPIRATION

It is important to measure temperature, pulse and respiration accurately because small change in vital signs may be due to change in medical condition of a patient. Record it on a record sheet. A sample record sheet is given in Table 4.7. Report or refer the patient if there is any change from previous value or if the recordings of vital signs are above or below normal values. Vital signs are usually recorded on graphic forms (a sample graph is given in Fig. 4.14 for your reference).

Recording temperature, pulse and respiration

Name of the patient:
Age:
Sex:
Diagnosis:

Table 4.7: Record Sheet

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Temperature</th>
<th>Pulse</th>
<th>Respiration</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 a.m.</td>
<td>98.4°F</td>
<td>70 per minute</td>
<td>20</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Signature
4.7 LET US SUM UP

Vital signs i.e. temperature, pulse and respiration are the important indicators of health and vital functions of a person/patient. You need to understand the meaning and purpose of vital signs and steps of procedures followed in checking and recording the vital signs. In this practical we have focused on various aspects of checking temperature, pulse, respiration which included definition, purposes, sites of checking temperature, pulse and respiration, normal values and procedure followed in checking temperature, pulse, and respiration.

You should remember that you must check the temperature, pulse and respiration at the same time sequentially rather than checking temperature at one time, pulse at other time and respiration some other time.

4.8 ACTIVITIES

Activity 1  Calculate and convert the temperature from Centigrade to Fahrenheit as per guidelines.
Activity 2  Take temperature and note down for yourself the following procedures and record as per guidelines:

- Select 10 patients and practice/taking temperature at various sites as per guidelines i.e. Oral, Rectal and Axila
- Count the radial pulse and record as per guidelines.
- Count respiratory rate and record the findings as per guidelines.

Activity 3  Select five patients for taking temperature, pulse, respiration and record the findings as per guidelines. Get all the readings checked/verified from your supervisor.